

Cleanup Currents



October 2020

Lower Duwamish Waterway Superfund Site



Baseline Sampling

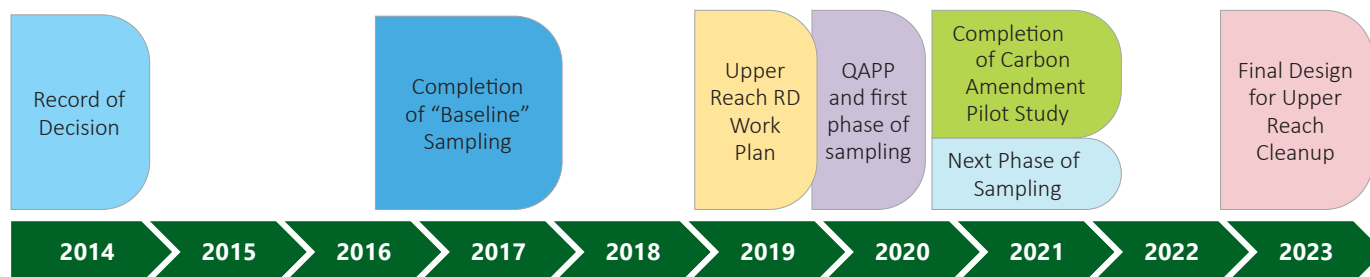
Two years of “baseline” sampling of sediment, water, and seafood were completed in 2017 and 2018 after the cleanup plan was finalized in the Record Of Decision. Sampling results show average levels in sediment of the four main contaminants for human health have improved. Reduced levels were expected, due to early action area cleanups (see map on Page 3), ongoing reductions in on-shore pollution sources, and the clean Green River sediment settling in parts of the waterway. The baseline sampling report is [available online](#).

Sediment Cleanup Design in the Upper Reach

Cleanup design for the southernmost two miles of the Lower Duwamish Waterway (LDW), the Upper Reach, is under way. EPA approved the [work plan](#) for the design in December 2019, including a plan for two rounds of data collection in the [pre-design investigation work plan](#).

The detailed field and lab plan for 2020, also known as the [Quality Assurance Project Plan](#), (QAPP) was ready in May and sediment samples were collected in June. The 2020 sampling results will be used to refine cleanup areas and focus plans for sampling in spring 2021. The 2021 data will help define dredging depths and provide engineering data for design. The Upper Reach design process is expected to be finished in late 2023, and cleanup would likely follow in late 2024. Design and cleanup of other parts of LDW will progress from south to north.

For more information about the cleanup, please contact **Elly Hale**: (206) 553-1215 • hale.elly@epa.gov.



Lower Duwamish Waterway Roundtable

Roundtable members last met in person in October 2019 to discuss the Remedial Design approach and sampling plans for the Upper Reach Pre-Design Investigation. At this meeting, an educational exercise on the cleanup was well-received. From this, EPA developed an informational webinar series to further Roundtable members’ understanding about the cleanup. The first webinar was held in July 2020; webinars will continue this fall and winter.

For more information about the Roundtable and to find out how you can participate, please visit www.duwamishwaterwayroundtable.org where you can see Roundtable meeting materials, background information, training resources including the webinar series, and contact information for the Roundtable.

If you are interested in participating in the Roundtable, please contact **Julie Congdon** (206) 553-2752 • congdon.julie@epa.gov

Fish Consumption Institutional Controls Program



Photo by Public Health Seattle-King County

In partnership with Public Health – Seattle & King County and Community Health Advocates, EPA finalized in August 2019 the Lower Duwamish Waterway Seafood Consumption Institutional Controls Implementation and Assurance Plan.

Community Health Advocates and PHSKC worked directly with the fisher community and their families to develop tools and training to educate fishers and those eating fish about the contaminated Duwamish Superfund site.

Project goals are to promote healthy actions around fishing for and eating salmon from the LDW and to avoid eating the contaminated resident fish and seafood. Materials were developed in collaboration with three fisher communities—Latino, Cambodian and Vietnamese.

In addition to the updated CHA Training Curriculum ([Curriculum Version 2.0](#)) for capacity building, and CHA-led outreach events, the following tools were completed in four languages (English, Khmer, Spanish, and Vietnamese):

- [Youth activity coloring book](#)
- [“Healthy Fishing on the Duwamish-- Let’s Catch Salmon” fishing videos](#) – fishing rules and fishing for/preparing salmon (collaboration with Washington Department of Fish and Wildlife and the University of Washington Superfund Research Program)
- [Duwamish Fish Advisory pocket size cards](#)

The CHAs have also been planning targeted strategies for a moms/caregivers’ mini-series workshop (involving salmon cooking demos) and a Duwamish fishing club (involving a class about salmon fishing on the LDW and a fishing competition).

With the onset of the COVID-19 pandemic in March 2020, Public Health and CHAs moved their community engagement work online. CHA recruitment and the Community Steering Committee meetings have been successful, for example, through online breakout rooms for in-language work and simultaneous translation.

For more information about the [Fun to Catch, Toxic to Eat Program](#), please contact:

US EPA: Piper Peterson (206) 553-4951
peter.piper@epa.gov

Public Health Seattle & King County:
 Sinang Lee (206) 263-1192
sinang.lee@kingcounty.gov

SAFE TO EAT
 2-3 MEALS per week

Chum
 Coho
 Pink
 Sockeye

OR

LIMIT
 1 MEAL per week

Chinook (King)

OR

CAUTION
 2 MEALS per month



Blackmouth Resident Chinook caught during winter

Meal Size
 Adult Child
 One meal size is about the size and thickness of your hand.

EVERYONE - DO NOT EAT RESIDENT FISH, SHELLFISH, or CRAB
 Especially WOMEN who are or may become PREGNANT, NURSING MOTHERS, and CHILDREN. They have chemicals that can harm the growth and brain development of babies and children.

Crab
 Starry flounder
 Perch
 Clams
 Rockfish
 Mussels
 Sole

Early Action Areas in the Lower Duwamish Waterway

-  Lower Duwamish Waterway
-  Early Action Area (EAA)

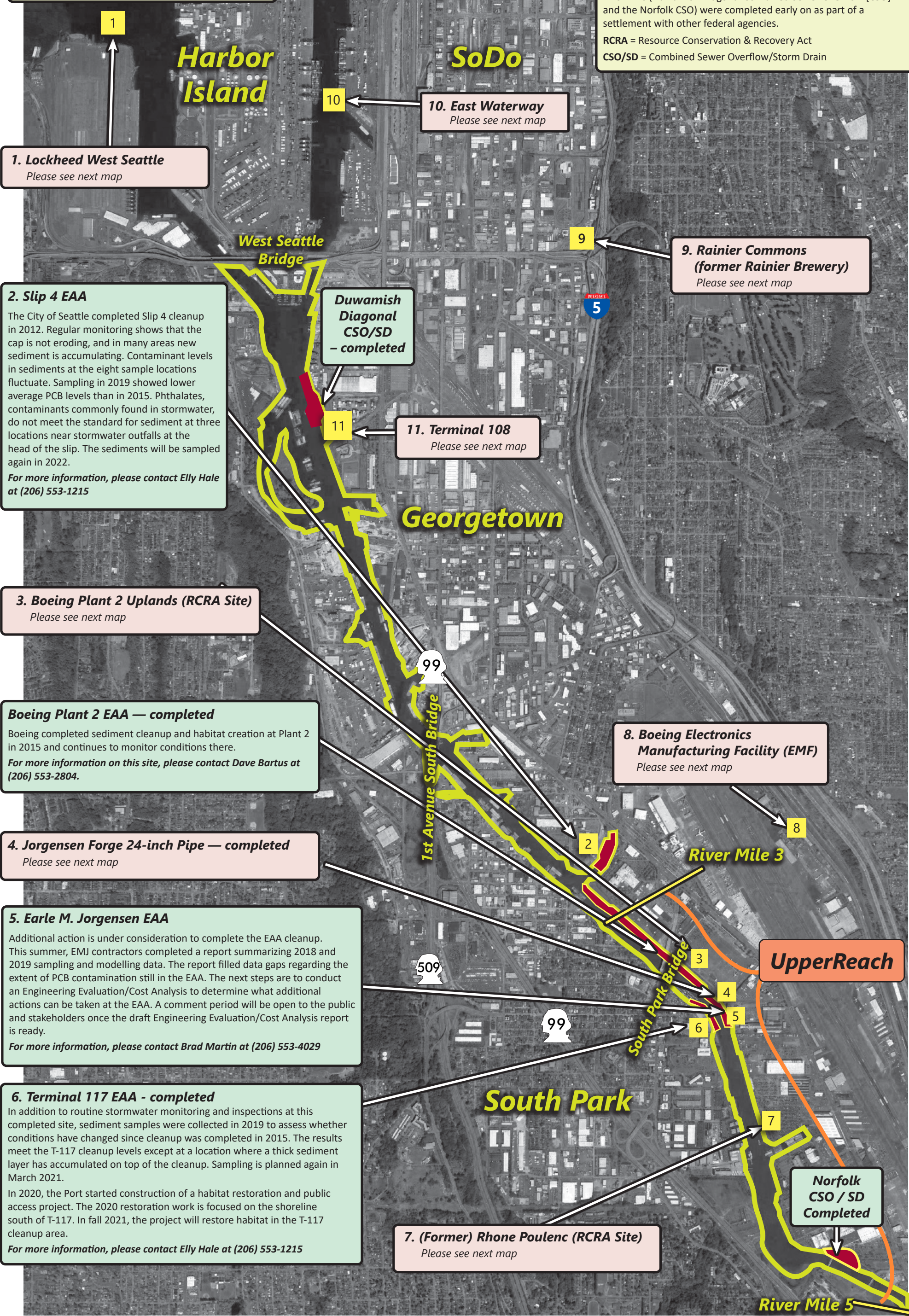
Acronyms

LDW = Lower Duwamish Waterway



EAA = Early Action Area: One of five areas where early cleanup was needed to address high levels of sediment contamination. Two EAAs (Duwamish Diagonal Combined Sewer Overflow [CSO] and the Norfolk CSO) were completed early on as part of a settlement with other federal agencies.

RCRA = Resource Conservation & Recovery Act

CSO/SD = Combined Sewer Overflow/Storm Drain



EPA's Recent Work in the Lower Duwamish Waterway

-  Lower Duwamish Waterway
-  Early Action Area (EAA)

Harbor Island

EPA conducted its fifth five-year review of the environmental cleanups at the Harbor Island Superfund Site. The final report is posted on the Harbor Island Superfund website at epa.gov/superfund/harbor-island
For more information on this site, please contact Ravi Sanga at (206) 553-4092

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1. Lockheed West Seattle

The cleanup at this site is complete. In two in-water work seasons, over 100,000 cubic yards of contaminated mud and shoreline debris were removed, and also placed 6 to 9 inches of clean sediments across the 40-acre site. Cleanup activities were finished in March 2020.

For more information, please contact Piper Peterson at (206) 553-4951

11. Terminal 108 (T108)

In May 2020, the Port of Seattle, City of Seattle, and King County agreed to perform an Engineering Evaluation and Cost Analysis (EE/CA) for the site. The property was used for sewage treatment ponds associated with a wastewater treatment plant and various industrial operations in the past. The EE/CA will study site conditions and, if necessary, develop cleanup options. Once a contractor has been selected, they will develop a work plan for the project. Field investigations are expected to start in 2021 and take about two years

For more information, please contact Anne Christopher at (503) 356-6554.

10. East Waterway

The Proposed Plan for the cleanup of sediments in the East Waterway is anticipated to be released in 2021. The East Waterway is part of the Harbor Island Superfund site, located downstream of the LDW.

For more information on this site, please contact Ravi Sanga at (206) 553-4092

9. Rainier Commons (former Rainier Brewery)

Work continues on the phased removal of PCB-containing paint from outdoor and indoor surfaces at this complex of buildings. EPA is reviewing planning documents for Phase 3 work to ensure safe practices and protection of tenants, air and water quality. EPA will coordinate directly with tenants in advance of the paint removal work planned for 2021.

For more information, please contact Michelle Mullin at (206) 553-1616

Duwamish Diagonal CSO/SD – completed

3. Boeing Plant 2 Uplands (RCRA Site)

EPA is developing its response to comments from the Statement of Basis, released in June 2019, as well as its final corrective action decision for the cleanup of this site.

For more information, please contact Dave Bartus at (206) 553-2804

Cleanup of Contaminated Land in the Duwamish: Ecology's Source Control Work (not shown on this map)

Source control is crucial to the success of EPA's in-waterway cleanup. When the sources of pollution are sufficiently controlled, recontamination of the sediments above a Remedial Action Level (RAL) is minimized. EPA's in-waterway cleanup of the river sediments can start.

Washington State Department of Ecology leads the effort to control sources of contamination from the land area surrounding the LDW Superfund Site. Ecology is managing 23 cleanup sites through its formal cleanup process, with additional sites currently under negotiation. Many other sites are being cleaned up under Ecology's Voluntary Cleanup Program. These cleanups are part of source control: stopping or reducing contaminant sources before they reach the river. Source control also includes many other actions, such as business inspections, controlling stormwater runoff and sewage overflows, coordinating between agencies, and educating the public.

For more information on Ecology's work in the LDW, visit <https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Cleanup-sites/Lower-Duwamish-Waterway>

4. Jorgensen Forge 24-inch Pipe — completed

Removal of a PCB-contaminated pipe and dirt below it was completed in 2018

5. Earle M. Jorgensen Forge (EMJ) EAA

6. Terminal 117 EAA — completed

Carbon Amendment Study

Following the third year of sampling in 2020, the carbon amendment pilot study is nearly finished. EPA expects to have enough data to decide whether activated carbon will be added to materials used for enhanced natural recovery. PCBs, a widespread contaminant in Lower Duwamish sediments and seafood, bind to carbon. Adding carbon could make the PCBs less bioavailable.

For more information, please contact Elly Hale at (206) 553-1215.

7. (Former) Rhone Poulenc (RCRA Site)

EPA reviewed the final report from the pilot study of injecting carbon dioxide into the groundwater to lower pH. The onsite study was successful, and the report is a compilation of the data and results from the study. EPA will use this information in the upcoming Corrective Measures Study. EPA is also finishing up an update to the preliminary cleanup levels.

For more information, please contact Janette Knittel at (206) 553-0483

8. Boeing Electronics Manufacturing Facility (EMF)

Boeing continues to voluntarily implement enhanced reductive dechlorination to treat solvents in groundwater. At this time, the only contaminant of concern recently detected near the LDW shoreline is cis-1,2-dichlorethene.

For more information, please contact Laura Castrilli at (206) 553-4323

2. Slip 4 EAA — Completed

Boeing Plant 2 EAA — completed

Upper Reach
See text on first page

Norfolk CSO / SD Completed

River Mile 5

What can I do?

1. The best way to avoid being exposed to contamination in the river is to **not eat** the resident fish that have the contaminants in their body. It is safe to eat salmon, because they visit the river for such a short time.
2. Help keep pollutants from getting into the river. Don't put oil and other pollutants into storm drains.
3. Report spills. If you see signs of a spill in the waterway, please report it by calling 1-800-OILS-911 (Department of Emergency Management 24/7). For more information, please visit ecology.wa.gov/Spills-Cleanup/Spills/Spill-preparedness-response.
4. Help restore habitat, plant trees, and clean up trash along the river at parks and on the shoreline by participating in Duwamish Alive and other volunteer events. For more information, please visit <http://www.duwamishalive.org>

To learn more about how to get involved in the cleanup, please contact **Julie Congdon:**
(206) 553-2752 • congdon.julie@epa.gov

Photo by Public Health Seattle-King County

For more information

Elly Hale, Remedial Project Manager

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(206) 553-1215 • hale.elly@epa.gov

Julie Congdon, Community Involvement Coordinator

U.S. Environmental Protection Agency, Region 10
(206) 553-2752 • congdon.julie@epa.gov

For information on **US Environmental Protection Agency's work** in the Lower Duwamish Waterway, please visit: epa.gov/superfund/lower-duwamish.

To receive **regular updates** on EPA's cleanup work, please contact Julie Congdon (congdon.julie@epa.gov) to subscribe to the **Duwamish cleanup listserv**.

Follow us on Facebook to stay informed about our cleanup activities and our programs related to the Duwamish area: facebook.com/epaduamish

For information on **Washington Department of Ecology's work** in the Lower Duwamish Waterway, please visit: ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Cleanup-sites/Toxic-cleanup-sites/Lower-Duwamish-Waterway

For information on the **Community Advisory Group**, please contact the Duwamish River Cleanup Coalition/ Technical Advisory Group (DRCC/TAG) at duwamishcleanup.org • contact@duwamishcleanup.org
(206) 954-0218.

EPA provides reasonable accommodation to individuals with disabilities where appropriate. If you need a reasonable accommodation, such as requiring information in a certain format (Braille, large print), please notify Julie Congdon, listed above. TDD or TTY users, please call (800) 877-8339 and give the operator Julie's phone number.



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Lower Duwamish Waterway Superfund Site



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Environmental Protection
Agency

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October 2020